

AMENDMENTS TO THE SPECIFICATION

Please replace the section entitled "DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS" added by amendment dated July 30, 2007 with the following amended section:

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A hand-held electrostatic spraying device made in accordance with the first preferred embodiment of the present invention is depicted in perspective front and rear views in FIGS. 1A - 1B. The hand-held electrostatic spraying device 10 has an integrated replaceable cartridge 20 having multiple reservoirs. The replaceable cartridge 20 is depicted attached to the hand-held electrostatic spraying device 10.

A replaceable cartridge having multiple reservoirs made in accordance with the first preferred embodiment of the present invention is depicted in top and cross-sectional views in FIGS. 2A - 2B. The replaceable cartridge 20 shown in FIG. 2B comprises a plurality of separate storage regions (reservoirs) 22 for storing electrostatically sprayable material, each of which is contained in a three-dimensional sector of the replaceable cartridge. The replaceable cartridge 20 has a plurality of material conducting tubes 40 each of which connects directly with a spraying nozzle 30. Delivery of an electric charge through a selected terminal 34 to a designated spraying nozzle 30 sublimates the electrostatically sprayable material into many droplets which are focused when the

forward extremity of the nozzle-ring configuration 50 is brought within a predetermined distance of an earthed target to be sprayed. In one variant of this alternate embodiment, the nozzle-ring configuration 50 can comprise an annular cable in concentric relation with the spraying nozzle 30. FIG. 2B depicts an end-on view of the replaceable cartridge 20 at a first end 21 of the replaceable cartridge 20.

FIGS. 3A – 3B depict a variant of the first preferred embodiment where the nozzles 30 are mounted in fixed relation to the body of the replaceable cartridge 20 having multiple reservoirs. FIG. 3B depicts an end-on view of the replaceable cartridge 20 at a first end 21 of the replaceable cartridge 20.

In an alternate embodiment of the invention shown in FIGS. 4A – 4B, a replaceable cartridge 20 comprises a plurality of separate storage regions 22, each of which is contained in a three-dimensional sector of the replaceable cartridge. The storage regions 22 are for storing electrostatically sprayable material. The replaceable cartridge 20 has a plurality of material conducting tubes 40 and a pumping means 70. Each of the plurality of material conducting tubes is directly connected with a spraying nozzle 30. The pumping of the material by the pumping means is produced in response to operation of actuating means by the user. Delivery of an electric charge through a selected terminal 34 to a designated spraying nozzle 30 sublimates the electrostatically sprayable material into many droplets which are focused when the forward extremity of the nozzle-ring configuration 50 is brought within a predetermined distance of an earthed target to be

sprayed. FIG. 4B depicts an end-on view of the replaceable cartridge 20 at a first end 21 of the replaceable cartridge 20.

In another alternate embodiment of the invention shown in FIGS. 5A – 5B, a replaceable cartridge 20 comprises a storage region 22, which is contained in a three-dimensional sector of the replaceable cartridge. The storage region 22 is for storing electrostatically sprayable material. The replaceable cartridge 20 has a plurality of material conducting tubes 40 each of which directly connect with a spraying nozzle 30. Delivery of an electric charge through the terminal 34 to spraying nozzles 30 sublimates the electrostatically sprayable material into many droplets which are focused when the forward extremity of the nozzle-ring configuration 50 is brought within a predetermined distance of an earthed target to be sprayed. In one variant of this alternate embodiment, the nozzle-ring configuration 50 can comprise an annular cable in concentric relation with the spraying nozzles 30. FIG. 5B depicts an end-on view of the replaceable cartridge 20 at a first end 21 of the replaceable cartridge 20.

In another alternate embodiment of the invention shown in FIGS. 6A – 6B, a replaceable cartridge 20 comprises a storage region 22, which is contained in a three-dimensional sector of the replaceable cartridge. The storage region 22 is for storing electrostatically sprayable material. The replaceable cartridge 20 has a material conducting tube 40 and a pumping means 70. The material conducting tube 40 is directly

connected to spraying nozzles 30. The pumping of the material by the pumping means is produced in response to operation of actuating means by the user. Delivery of an electric charge through the terminal 34 to spraying nozzles 30 sublimates the electrostatically sprayable material into many droplets which are focused when the forward extremity of the nozzle-ring configuration 50 is brought within a predetermined distance of an earthed target to be sprayed. FIG. 6B depicts an end-on view of the replaceable cartridge 20 at a first end 21 of the replaceable cartridge 20.

In other alternate embodiments of the present invention, the replaceable cartridge 20 can include just one nozzle 30, as shown in FIGS. 7A – 7B, or one nozzle 30 and a pumping means 70, as shown in FIGS. 8A – 8B. FIGS. 7B and 8B depict end-on views of the replaceable cartridges 20 at first ends 21 of the replaceable cartridges 20.

A complete hand-held electrostatic spraying device 10 having a replaceable cartridge 20, at least one replaceable spraying nozzle region 33, a high voltage generator 60, a power source 82, a control circuit 80, a trigger 81 and terminals 61 connected to the high voltage generator 60, all made in accordance with the first preferred embodiment of the present invention, is shown in FIGS. 9A - 9D. The electrostatic spraying device 10 comprises a housing 11 enclosing components 60, 61, 80, 81 and 82. In one embodiment, a portion of the housing 11 of the electrostatic spraying device 10 coincident with the power source comprises a first end 12. The first end 12 comprises a handle that may be grasped during spraying operations. The replaceable cartridge is

placed in the hand-held electrostatic spraying device in an opening 13 toward a second end 14 of the housing. The replaceable cartridge 20 shown in FIG. 9A – 9D comprises a plurality of separate storage regions 22, each of which is contained in a three-dimensional sector of the replaceable cartridge. The plurality of storage regions 22 are for storing electrostatically sprayable material. The hand-held electrostatic spraying device 10 has multiple terminals 61 that directly connect with a high voltage generator 60. During spraying operations when terminals 61 connect to a designated terminal 34 from the replaceable cartridge 20, an electric charge is delivered through selected terminals 61 and 34 and sublimates the electrostatically sprayable material into many droplets which are focused when the forward extremity of the nozzle-ring configuration 50 is brought within a predetermined distance of an earthed target to be sprayed. In one variant of this alternate embodiment, the nozzle-ring configuration 50 can comprise an annular cable in concentric relation with the spraying nozzle 30.

In an alternate embodiment shown in FIGS. 10A – 10D, a hand-held electrostatic spraying device 10 having wiring 61 can be integrated with a replaceable cartridge 20 having a single storage region 22 for storing electrostatically sprayable material. The hand-held electrostatic spraying device 10 and replaceable cartridge 20 ionize electrostatically sprayable material stored in storage region 22 into electrostatically charged droplets during spraying operations.

In other alternate embodiments shown, respectively, in FIGS. 11A – 11D and FIGS. 12A – 12D, a hand-held electrostatic spraying device 10 can have a plurality of separate storage regions 22 or having a single storage region 22. In both embodiments, the storage regions 22 are for storing electrostatically sprayable material. When the cartridges 20 are mounted in hand-held electrostatic spraying devices as shown in FIGS. 11D and 12D, the storage regions are connected to fixed spraying nozzle region 32 to generate single or multiple materials into electrostatically charged droplets. An electric charge is applied to each ~~Each~~ material 23 from individual material storage regions 22 through selected terminals 61 and 34 in a passive feed arrangement.

In further alternate embodiments shown, respectively, in FIGS. 13A – 13D and FIGS. 14A – 14D, a hand-held electrostatic spraying devices 10 can have a replaceable cartridge 20 with a plurality of storage regions 22 or a replaceable cartridge 20 with a single storage region. In both embodiments, a pumping force is applied by pumping means 70 to supply material 23 from the material storage regions 22 to the spraying nozzle regions 31 during electrostatic spraying operations.

In still further alternate embodiments of the present invention shown, respectively, in FIGS. 15A – 15D and FIGS. 16A – 16D, hand-held electrostatic spraying devices 10 can have a plurality of separate storage regions 22 or a single storage region 22. In both embodiments, the storage regions 22 are for storing electrostatically sprayable material and when cartridges 20 are installed in electrostatic spraying devices 10 the

storage regions are connected to fixed spraying nozzle regions 32 to generate single or multiple materials into electrostatically charged droplets. Each material 23 from individual material storage region 22 is supplied to the spraying nozzle regions 31 by a pumping force provided by a pumping means 70 during electrostatic spraying operations.

In even further alternate embodiments of the present invention shown in FIGS. 17A – 17D, hand-held electrostatic spraying devices 10 can have a plurality of separate storage regions 22 or a single storage region 22. The storage regions 22 are for storing electrostatically sprayable material, and when cartridges 20 are installed in electrostatic spraying devices 10 the storage regions 22 are connected to fixed spraying nozzle regions 32 to generate single or multiple materials, respectively, into electrostatically charged droplets. Each material 23 from individual material storage region 22 can be supplied to the spraying nozzle region 31 through a pumping means 70 (such as, for example, a pneumatic pump). The pumping means 70 is actuated by a trigger 81 to pneumatically pump the electrostatically sprayable material 23 from the material storage region 22 to the spraying nozzle region 32 during electrostatic spraying operations.